

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
L4 and transactivat\$	43

**Database:**

US Patents Full-Text Database  
US Pre-Grant Publication Full-Text Database  
JPO Abstracts Database  
EPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Search:**

L5

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History****DATE:** Monday, June 24, 2002   [Printable Copy](#)   [Create Case](#)**Set Name   Query**  
side by side**Hit Count   Set Name**  
result set*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=NO; OP=OR*

<u>L5</u>	L4 and transactivat\$	43	<u>L5</u>
<u>L4</u>	L3 and reporter\$	156	<u>L4</u>
<u>L3</u>	(two with hybrid) same (stabl\$ or constitutive\$)	475	<u>L3</u>
<u>L2</u>	(two with hybrid) same (stabl\$ with express)	0	<u>L2</u>
<u>L1</u>	dihybrid same (stabl\$ or constitutive\$) same (express\$ or transfect\$)	0	<u>L1</u>

END OF SEARCH HISTORY

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
L6 and 65	46

**Database:**

US Patents Full-Text Database  
 US Pre-Grant Publication Full-Text Database  
 JPO Abstracts Database  
 EPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:**

L7

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History**
**DATE: Monday, June 24, 2002**
[Printable Copy](#)
[Create Case](#)
**Set Name Query**

side by side

**Hit Count Set Name**

result set

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=NO; OP=OR

<u>L7</u>	L6 and 65	46	<u>L7</u>
<u>L6</u>	L3 and (stabl\$ with transfect\$)	68	<u>L6</u>
<u>L5</u>	L4 and transactivat\$	43	<u>L5</u>
<u>L4</u>	L3 and reporter\$	156	<u>L4</u>
<u>L3</u>	(two with hybrid) same (stabl\$ or constitutive\$)	475	<u>L3</u>
<u>L2</u>	(two with hybrid) same (stabl\$ with express)	0	<u>L2</u>
<u>L1</u>	dihybrid same (stabl\$ or constitutive\$) same (express\$ or transfect\$)	0	<u>L1</u>

END OF SEARCH HISTORY

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
l4 same transact\$	5

**Database:**

US Patents Full-Text Database  
 US Pre-Grant Publication Full-Text Database  
 JPO Abstracts Database  
 EPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:**

L5

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History**
**DATE: Monday, June 24, 2002**    [Printable Copy](#)    [Create Case](#)
**Set Name**    **Query**  
 side by side

**Hit Count**    **Set Name**  
 result set

*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=NO; OP=OR*

<u>L5</u>	l4 same transact\$	5	<u>L5</u>
<u>L4</u>	chop	9189	<u>L4</u>
<u>L3</u>	chop\$ with transactivat\$	0	<u>L3</u>
<u>L2</u>	chop same transactivat\$	0	<u>L2</u>
<u>L1</u>	chop same (transactivat\$ with domain\$)	0	<u>L1</u>

END OF SEARCH HISTORY

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)[Cases](#)**Search Results -**

Terms	Documents
chop\$ with transactivat\$	0

**Database:**

US Patents Full-Text Database  
US Pre-Grant Publication Full-Text Database  
JPO Abstracts Database  
EPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Search:**

L3

[Refine Search](#)[Recall Text](#)[Clear](#)**Search History****DATE:** Monday, June 24, 2002   [Printable Copy](#)   [Create Case](#)

**Set Name**   **Query**  
side by side

**Hit Count**   **Set Name**  
result set

*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=NO; OP=OR*

<u>L3</u>	chop\$ with transactivat\$	0	<u>L3</u>
<u>L2</u>	chop same transactivat\$	0	<u>L2</u>
<u>L1</u>	chop same (transactivat\$ with domain\$)	0	<u>L1</u>

END OF SEARCH HISTORY

### Status: Path 1 of [Dialog Information Services via Modem]

### Status: Initializing TCP/IP using (UseTelnetProto 1 ServiceID pto-dialog)  
Trying 31060000009999...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\* HHHHHHHH SSSSSSS?

### Status: Signing onto Dialog

\*\*\*\*\*

ENTER PASSWORD:

\*\*\*\*\* HHHHHHHH SSSSSSS? \*\*\*\*\*

Welcome to DIALOG

### Status: Connected

Dialog level 02.05.22D

Last logoff: 18jun02 14:46:19

Logon file405 24jun02 11:55:59

\*\*\* ANNOUNCEMENT \*\*\*

\*\*\*

--Important Notice for Japanese KMKNET Users  
KMKNET will be terminated on 5/31/02. Please  
switch to DLGNET. Please refer to the G-Search  
home page at <http://www.g-search.or.jp>  
for more information.

\*\*\*

--SourceOne patents are now delivered to your  
email inbox as PDF replacing TIFF delivery.  
See HELP SOURCE1 for more information.

\*\*\*

--Important news for public and academic  
libraries. See HELP LIBRARY for more information.

\*\*\*

--Important Notice to Freelance Authors--  
See HELP FREELANCE for more information

\*\*\*

For information about the access to file 43 please see Help News43.

\*\*\*

NEW FILES RELEASED

\*\*\*AGROProjects (File 235)

\*\*\*ARCHIVES OF DERMATOLOGY - SUBSCRIBERS (File 787)

\*\*\*ARCHIVES OF GENERAL PSYCHIATRY -SUBSCRIBERS (File 794)

\*\*\*ARCHIVES OF INTERNAL MEDICINE - SUBSCRIBERS (File 795)

\*\*\*ARCHIVES OF NEUROLOGY - SUBSCRIBERS (File 796)

\*\*\*ARCHIVES OF OPHTHALMOLOGY - SUBSCRIBERS (File 797)

\*\*\*ARCHIVES OF OTOLARYNGOLOGY - SUBSCRIBERS (File 798)

\*\*\*ARCHIVES OF PEDIATRIC & ADOLESCENT MEDICINE-  
Subscribers (File 789)

\*\*\*ARCHIVES OF SURGERY - SUBSCRIBERS (File 800)

\*\*\*JAMA - Journal of the American Medical Association -  
Subscribers (File 785)

\*\*\*MIRA (File 81)

\*\*\*TRADEMARKSCAN-Japan (File 669)

\*\*\*

UPDATING RESUMED

\*\*\*Delphes European Business (File 481)

\*\*\*

RELOADED

\*\*\*CLAIMS/US PATENTS (Files 340, 341, 942)

\*\*\*Kompas Western Europe (590)

\*\*\*D&B - Dun's Market Identifiers (516)

REMOVED

\*\*\*Los Angeles Times (File 630)

\*\*\*Baton Rouge Advocate (File 382)  
\*\*\*Washington Post (File 446)  
\*\*\*Books in Print (File 470)  
\*\*\*Court Filings (File 793)  
\*\*\*Microcomputer Software Guide Online (File 278)  
\*\*\*Publishers, Distributors & Wholesalers of the U.S. (File 450)  
\*\*\*State Tax Today (File 791)  
\*\*\*Tax Notes Today (File 790)  
\*\*\*Worldwide Tax Daily (File 792)

\*\*\*New document supplier\*\*\*

IMED has been changed to INFOTRIE (see HELP OINFOTRI)

>>>Get immediate news with Dialog's First Release news service. First Release updates major newswire databases within 15 minutes of transmission over the wire. First Release provides full Dialog searchability and full-text features. To search First Release files in OneSearch simply BEGIN FIRST for coverage from Dialog's broad spectrum of news wires.

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<  
>>> of new databases, price changes, etc. <<<  
\*\*\*\*

KWIC is set to 50.

HIGHLIGHT set on as '\*'

SYSTEM:HOME

Cost is in DialUnits

Menu System II: D2 version 1.7.8 term=ASCII

\*\*\* DIALOG HOMEBASE(SM) Main Menu \*\*\*

Information:

1. Announcements (new files, reloads, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databases for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:

6. DIALOG(R) Document Delivery
7. Data Star(R)

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/H = Help

/L = Logoff

/NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).

?b biotech biochem medicine

24jun02 11:56:11 User243084 Session D280.1  
\$0.00 0.157 DialUnits FileHomeBase  
\$0.00 Estimated cost FileHomeBase  
\$0.04 TELNET  
\$0.04 Estimated cost this search  
\$0.04 Estimated total session cost 0.157 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 5:Biosis Previews(R) 1969-2002/Jun W3

(c) 2002 BIOSIS

File 6:NTIS 1964-2002/Jul W1

(c) 2002 NTIS, Intl Cpyrght All Rights Res

\*File 6: See HELP CODES6 for a short list of the Subject Heading Codes

(SC=, SH=) used in NTIS.

File 8: Ei Compendex(R) 1970-2002/Jun W4

(c) 2002 Engineering Info. Inc.

File 34: SciSearch(R) Cited Ref Sci 1990-2002/Jun W4

(c) 2002 Inst for Sci Info

File 65: Inside Conferences 1993-2002/Jun W4

(c) 2002 BLDSC all rts. reserv.

File 71: ELSEVIER BIOBASE 1994-2002/Jun W4

(c) 2002 Elsevier Science B.V.

File 73: EMBASE 1974-2002/Jun W3

(c) 2002 Elsevier Science B.V.

**\*File 73: For information about Explode feature please see Help News73.**

File 76: Life Sciences Collection 1982-2002/Jun

(c) 2002 Cambridge Sci Abs

File 94: JICST-EPlus 1985-2002/May W1

(c) 2002 Japan Science and Tech Corp(JST)

**\*File 94: There is no data missing. UDs have been adjusted to reflect the current months data. See Help News94 for details.**

File 98: General Sci Abs/Full-Text 1984-2002/May

(c) 2002 The HW Wilson Co.

File 99: Wilson Appl. Sci & Tech Abs 1983-2002/May

(c) 2002 The HW Wilson Co.

File 135: NewsRx Weekly Reports 1995-2002/Apr W1

(c) 2002 NewsRx

File 143: Biol. & Agric. Index 1983-2002/May

(c) 2002 The HW Wilson Co

File 144: Pascal 1973-2002/Jun W4

(c) 2002 INIST/CNRS

File 155: MEDLINE(R) 1966-2002/Jun W3

**\*File 155: Daily alerts are now available. This file has been reloaded. Accession numbers have changed.**

File 172: EMBASE Alert 2002/Jun W4

(c) 2002 Elsevier Science B.V.

File 266: FEDRIP 2002/Apr

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File 315: ChemEng & Biotec Abs 1970-2001/Dec

(c) 2002 DECHEMA

File 357: Derwent Biotech Res. 1982-2002/Mar W5

(c) 2002 Thomson Derwent & ISI

**\*File 357: Price changes as of 1/1/02. Please see HELP RATES 357.**  
Derwent announces file enhancements. Please see HELP NEWS 357.

File 358: Current BioTech Abs 1983-2001/Oct

(c) 2001 DECHEMA

**\*File 358: Updates delayed. Please see HELP NEWS 358 for details.**

File 369: New Scientist 1994-2002/Jun W2

(c) 2002 Reed Business Information Ltd.

File 370: Science 1996-1999/Jul W3

(c) 1999 AAAS

**\*File 370: This file is closed (no updates). Use File 47 for more current information.**

File 399: CA SEARCH(R) 1967-2002/UD=13626

(c) 2002 AMERICAN CHEMICAL SOCIETY

**\*File 399: Use is subject to the terms of your user/customer agreement.**  
RANK charge added; see HELP RATES 399.

File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec

(c) 1998 Inst for Sci Info

File 40: Enviroline(R) 1975-2002/May

File 41: Pollution Abs 1970-2002/Jul

(c) 2002 Cambridge Scientific Abstracts

File 50: CAB Abstracts 1972-2002/May

(c) 2002 CAB International

**\*File 50: Truncating CC codes is recommended for full retrieval.**  
See Help News50 for details.

File 68: Env.Bib. 1972-2002/May

(c) 2002 Internl Academy at Santa Barbara

File 77: Conference Papers Index 1973-2002/May

(c) 2002 Cambri Sci Abs  
 File 103:Energy SciTec 1974-2002/Jun B1  
 (c) 2002 Contains copyrighted material  
**\*File 103: For access restrictions see Help Restrict.**  
 File 156:ToxFile 1966-2002/Mar W4  
 (c) 2002  
 File 162:CAB HEALTH 1983-2002/May  
 (c) 2002 CAB INTERNATIONAL  
**\*File 162: Truncating CC codes is recommended for full retrieval.**  
 See Help News162 for details.  
 File 305:Analytical Abstracts 1980-2002/Jun W2  
 (c) 2002 Royal Soc Chemistry  
**\*File 305: Frequency of updates and Alerts changing to weekly.**  
 See HELP NEWS 305.  
 File 35:Dissertation Abs Online 1861-2002/May  
 (c) 2002 ProQuest Info&Learning  
 File 48:SPORTDiscus 1962-2002/Jun  
 (c) 2002 Sport Information Resource Centre  
 File 91:MANTIS(TM) 1880-2002/Aug  
 2001 (c) Action Potential  
 File 149:TGG Health&Wellness DB(SM) 1976-2002/Jun W3  
 (c) 2002 The Gale Group  
 File 159:Cancerlit 1975-2002/May  
 (c) format only 2002 Dialog Corporation  
**\*File 159: The file will be reloaded. Accession Numbers will change.**  
 File 164:Allied & Complementary Medicine 1984-2002/Jun  
 (c) 2002 BLHCIS  
 File 442:AMA Journals 1982-2002/Jun B1  
 (c)2002 Amer Med Assn -FARS/DARS apply  
 File 444:New England Journal of Med. 1985-2002/Jun W4  
 (c) 2002 Mass. Med. Soc.  
 File 457:The Lancet 1986-2000/Oct W1  
 (c) 2000 The Lancet, Ltd.  
**\*File 457: Please note that this file will be removed from Dialog**  
**effective July 1, 2002. See Help News457 for further information.**  
 File 467:ExtraMED(tm) 2000/Dec  
 (c) 2001 Informania Ltd.  
**\*File 467: For information about updating status please see Help News467.**

Set	Items	Description
---	-----	-----
?s chop?	(s)	transactiv?
	55955	CHOP?
	83015	TRANSACTIV?
S1	73	CHOP? (S) TRANSACTIV?
?rd		
...examined	50 records	(50)
...completed	examining records	
S2	19	RD (unique items)
?show files;	ds;t/3,k/all	
File 5:	Biosis Previews(R)	1969-2002/Jun W3
	(c) 2002 BIOSIS	
File 6:	NTIS	1964-2002/Jul W1
	(c) 2002 NTIS, Intl Cpyrght All Rights Res	
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File 65:	Inside Conferences	1993-2002/Jun W4
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File 71:	ELSEVIER BIOBASE	1994-2002/Jun W4
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File 73:	EMBASE	1974-2002/Jun W3
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File 76:	Life Sciences Collection	1982-2002/Jun
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 File 143:Biol. & Agric. Index 1983-2002/May  
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 File 399:CA SEARCH(R) 1967-2002/UD=13626  
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 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
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 File 40:Enviroline(R) 1975-2002/May  
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 File 50:CAB Abstracts 1972-2002/May  
 (c) 2002 CAB International  
 File 68:Env.Bib. 1972-2002/May  
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 File 103:Energy SciTec 1974-2002/Jun B1  
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 (c) 2002  
 File 162:CAB HEALTH 1983-2002/May  
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 File 305:Analytical Abstracts 1980-2002/Jun W2  
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 File 35:Dissertation Abs Online 1861-2002/May  
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 File 48:SPORTDiscus 1962-2002/Jun  
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 File 91:MANTIS(TM) 1880-2002/Aug  
 2001 (c) Action Potential  
 File 149:TGG Health&Wellness DB(SM) 1976-2002/Jun W3  
 (c) 2002 The Gale Group  
 File 159:Cancerlit 1975-2002/May  
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 File 164:Allied & Complementary Medicine 1984-2002/Jun  
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 File 442:AMA Journals 1982-2002/Jun B1  
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 File 444:New England Journal of Med. 1985-2002/Jun W4  
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 File 457:The Lancet 1986-2000/Oct W1  
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Set	Items	Description
S1	73	CHOP? (S) TRANSACTIV?
S2	19	RD (unique items)

>>>KWIC option is not available in file(s): 41, 77, 399

2/3,K/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

13688188 BIOSIS NO.: 200200317009  
**The retinoid-inducible gene I: Effect on apoptosis and mitogen-activated kinase signal pathways.**  
AUTHOR: Huang Shiang-Long; Shyu Rong-Yaun; Yeh Ming-Yang; Jiang Shun-Yuan  
(a)  
AUTHOR ADDRESS: (a)Department of Microbiology and Immunology, National Defense Medical Center, Taipei, 114\*\*Taiwan E-Mail: jsy@ndmctsgh.edu.tw  
JOURNAL: Anticancer Research 22 (2A):p799-804 March-April, 2002  
MEDIUM: print  
ISSN: 0250-7005  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English

...ABSTRACT: RIGI-EGFP and RIGI-myc fusion proteins induced cellular apoptosis that was characterized by the presence of apoptotic bodies and in situ DNA breakage. The \*transactivation\* activities of Elk1, c-Jun and \*CHOP\* proteins were suppressed by 80, 50 and 88%, respectively, in HtTA cells expressing the RIGI-myc fusion protein for two days. Similarly, the \*transactivation\* activities of the \*CHOP\* protein was suppressed in TSGH9201 and HtTA cells transiently expressing RIGI-myc and RIGI-EGFP, respectively. Conclusion: The RIGI fusion proteins exhibited growth suppressive and...

2/3,K/2 (Item 2 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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13094154 BIOSIS NO.: 200100301303  
**Involvement of the pro-oncoprotein TLS (translocated in liposarcoma) in nuclear factor-kappaB p65-mediated transcription as a coactivator.**  
AUTHOR: Uranishi Hiroaki; Tetsuka Toshifumi; Yamashita Mayumi; Asamitsu Kaori; Shimizu Manabu; Itoh Makoto; Okamoto Takashi(a)  
AUTHOR ADDRESS: (a)Department of Molecular Genetics, Nagoya City University Medical School, 1 Kawasumi, Mizuho-cho, Mizuho-ku, Nagoya, Aichi, 467-8601: tokamoto@med.nagoya-cu.ac.jp\*\*Japan  
JOURNAL: Journal of Biological Chemistry 276 (16):p13395-13401 April 20, 2001  
MEDIUM: print  
ISSN: 0021-9258  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English

...ABSTRACT: by a coimmunoprecipitation experiment followed by Western blot of the cultured cell in vivo. TLS was originally identified as part of a fusion protein with \*CHOP\* arising from chromosomal translocation in human myxoid liposarcomas. TLS has been shown to be involved in TFIID complex formation and associated with RNA polymerase II. However, the role of TLS in transcriptional regulation has not yet been clearly elucidated. We found that TLS enhanced the NF-kappaB-mediated \*transactivation\* induced by physiological stimuli such as tumor necrosis factor alpha, interleukin-1beta, and overexpression of NF-kappaB-inducing kinase. TLS augmented NF-kappaB-dependent promoter...

...interferon-beta gene. These results suggest that TLS as a coactivator of NF-kappaB and plays a pivotal role in the NF-kappaB-mediated \*transactivation\*.

2/3,K/3 (Item 3 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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12794529 BIOSIS NO.: 200100001678  
**Role of C/EBP homologous protein (CHOP-10) in the programmed activation of CCAAT/enhancer-binding protein-beta during adipogenesis.**  
AUTHOR: Tang Qi-Qun(a); Lane M Daniel  
AUTHOR ADDRESS: (a)Department of Biological Chemistry, The Johns Hopkins University School of Medicine, Baltimore, MD, 21209:  
qqtang@welchink.welch.jhu.edu\*\*USA  
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 97 (23):p12446-12450 November 7, 2000  
MEDIUM: print  
ISSN: 0027-8424  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English

...ABSTRACT: binding activity and fails to localize to centromeres until preadipocytes traverse the G1-S checkpoint of mitotic clonal expansion. Evidence is presented that dominant-negative \*CHOP\*-10 expressed by growth-arrested preadipocytes transiently sequesters C/EBPbeta by heterodimerization. As preadipocytes reach S phase, \*CHOP\*-10 is down-regulated, apparently releasing C/EBPbeta from inhibitory constraint and allowing \*transactivation\* of the C/EBPalpha gene. In support of these findings, up-regulation of \*CHOP\*-10 with the protease inhibitor N-acetyl-Leu-Leu-norleucinal prevents activation of C/EBPbeta, expression of C/EBPalpha, and adipogenesis.

2/3,K/4 (Item 4 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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12623236 BIOSIS NO.: 200000376738  
**A novel zinc finger gene is fused to EWS in small round cell tumor.**  
AUTHOR: Mastrangelo Tiziana; Modena Piergiorgio; Tornielli Silvana; Bullrich Florentia; Testi Maria Adele; Mezzelani Alessandra; Radice Paolo; Azzarelli Alberto; Pilotti Silvana; Croce Carlo M; Pierotti Marco A; Sozzi Gabriella(a)  
AUTHOR ADDRESS: (a)Istituto Nazionale Tumori, Via G. Venezian 1, 20133, Milano\*\*Italy  
JOURNAL: Oncogene 19 (33):p3799-3804 3 August, 2000  
MEDIUM: print  
ISSN: 0950-9232  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English

...ABSTRACT: 22q12 to five different members of transcription factors namely FLI-1, ERG, ETV1, ELAF and FEV. Different classes of DNA binding proteins, ATF1, WT1 and \*CHOP\* are fused to EWS generating distinct tumor phenotypes: clear cell sarcoma, desmoplastic small round cell tumor, and myxoid liposarcoma, respectively. We have cloned a novel...  
...repressor-like domain at the N-terminus. The rearrangement involves intron 8 of EWS and exon 1 of ZSG creating a chimeric sequence containing the \*transactivation\* domain of EWS fused to zinc finger domain of ZSG. This product lacks the transcriptional repressor domain at the N-terminus of ZSG. A rearrangement...

2/3,K/5 (Item 5 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
(c) 2002 BIOSIS. All rts. reserv.

12273559 BIOSIS NO.: 200000027061

**CHOP enhancement of gene transcription by interactions with Jun/Fos AP-1 complex proteins.**

AUTHOR: Ubeda Mariano; Vallejo Mario; Habener Joel F(a)  
AUTHOR ADDRESS: (a)Laboratory of Molecular Endocrinology, Massachusetts General Hospital, 55 Fruit St., WEL320, Boston, MA, 02114-2696\*\*USA  
JOURNAL: Molecular and Cellular Biology 19 (11):p7589-7599 Nov., 1999  
ISSN: 0270-7306  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English

ABSTRACT: The transcription factor \*CHOP\* (C/EBP homologous protein 10) is a bZIP protein induced by a variety of stimuli that evoke cellular stress responses and has been shown to arrest cell growth and to promote programmed cell death. \*CHOP\* cannot form homodimers but forms stable heterodimers with the C/EBP family of activating transcription factors. Although initially characterized as a dominant negative inhibitor of C/EBPs in the activation of gene transcription, \*CHOP\*-C/EBP can activate certain target genes. Here we show that \*CHOP\* interacts with members of the immediate-early response, growth-promoting AP-1 transcription factor family, JunD, c-Jun, and c-Fos, to activate promoter elements in the somatostatin, JunD, and collagenase genes. The leucine zipper dimerization domain is required for interactions with AP-1 proteins and \*transactivation\* of transcription. Analyses by electrophoretic mobility shift assays and by an in vivo mammalian two-hybrid system for protein-protein interactions indicate that \*CHOP\* interacts with AP-1 proteins inside cells and suggest that it is recruited to the AP-1 complex by a tethering mechanism rather than by direct binding of DNA. Thus, \*CHOP\* not only is a negative or a positive regulator of C/EBP target genes but also, when tethered to AP-1 factors, can activate AP-1 target genes. These findings establish the existence of a new mechanism by which \*CHOP\* regulates gene expression when cells are exposed to cellular stress.

2/3,K/6 (Item 6 from file: 5)  
DIALOG(R) File 5:Biosis Previews(R)  
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11973935 BIOSIS NO.: 199900227248

**Complexes containing activating transcription factor (ATF)/cAMP-responsive-element-binding protein (CREB) interact with the CCAAT/enhancer-binding protein (C/EBP)-ATF composite site to regulate Gadd153 expression during the stress response.**

AUTHOR: Fawcett Timothy W; Martindale Jennifer L; Guyton Kathryn Z; Hai Tsonwin; Holbrook Nikki J(a)  
AUTHOR ADDRESS: (a)Gene Expression and Aging Section, Laboratory of Biological Chemistry, NIA, National Institutes \*\*USA  
JOURNAL: Biochemical Journal 339 (1):p135-141 April 1, 1999  
ISSN: 0264-6021  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English

QP 501.347  
u/ben

ABSTRACT: Gadd153, also known as \*chop\*, encodes a member of the CCAAT/enhancer-binding protein (C/EBP) transcription factor family and is transcriptionally activated by cellular stress signals. We recently demonstrated...

...expression declined. further demonstrated that ATF4 activates, while ATF3 represses, Gadd153 promoter activity through the CREB-ATF site. ATF3 also repressed ATF4-mediated \*transactivation\* and arsenite-induced activation of the Gadd153 promoter. Our results suggest that numerous members of the ATF/CREB family are involved in the cellular stress...

2/3,K/7 (Item 7 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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11314307 BIOSIS NO.: 199800095639

**TLS (translocated-in-liposarcoma) is a high-affinity interactor for steroid, thyroid hormone, and retinoid receptors.**

AUTHOR: Powers C Andrew(a); Mathur Mukul; Raaka Bruce M; Ron David; Samuels Hebert H

AUTHOR ADDRESS: (a)Div. Mol. Endocrinol., N.Y. Univ. Med. Cent., New York, NY 10016\*\*USA

JOURNAL: Molecular Endocrinology 12 (1):p4-18 Jan., 1998

ISSN: 0888-8809

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: in vivo. TLS was originally discovered as part of a fusion protein arising from a chromosomal translocation causing human myxoid liposarcomas. TLS contains a potent \*transactivation\* domain whose translocation-induced fusion with a DNA-binding protein (\*CHOP\*) yields a powerful transforming oncogene and transcription factor. The \*transactivation\* and RNA-binding properties of TLS and the nature of its interaction with nuclear receptors suggest a novel role in nuclear receptor function.

2/3,K/8 (Item 8 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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11085617 BIOSIS NO.: 199799706762

**The hepatitis B virus X protein enhances the DNA binding potential and transcription efficacy of bZip transcription factors.**

AUTHOR: Barnabas Sangeeta; Hai Tsonwin; Andrisani Ourania M(a)

AUTHOR ADDRESS: (a)Dep. Basic Med. Sci., Sch. Veterinary Med., Purdue Univ., 1246 Lynn Hall, West Lafayette, IN 479\*\*USA

JOURNAL: Journal of Biological Chemistry 272 (33):p20684-20690 1997

ISSN: 0021-9258

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: O. M. (1995) Proc. Natl. Acad. Sci. U. S. A. 92, 3819-3823). Here we examine pX interactions with bZip transcription factors ATF-3, gadd153/\*Chop10\*, ICER II-gamma, and NF-IL6. We demonstrate direct interactions in vitro between pX and the bZip proteins tested. In contrast MyoD and Gal4-1...

...involvement of pX in gene repression. We conclude that pX is an enhancer of the DNA binding potential of bZip transcription factors, thereby increasing the \*transactivation\* or repression efficacy of bZip-responsive genes.

2/3,K/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
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09443292 BIOSIS NO.: 199497451662

**Transcriptional activation by TAL1 and FUS-CHOP proteins expressed in acute**

Q 501.17  
Ubi

**malignancies as a result of chromosomal abnormalities.**

AUTHOR: Sanchez-Garcia I; Rabbitts T H

AUTHOR ADDRESS: Med. Res. Council Lab., Mol. Biol., Hills Rd., Cambridge  
CB2 2QH\*\*UK

JOURNAL: Proceedings of the National Academy of Sciences of the United  
States of America 91 (17):p7869-7873 1994

ISSN: 0027-8424

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

...ABSTRACT: ectopically activated in T-cell acute leukemias after  
chromosomal abnormalities caused by V-D-J recombinase error) (V,  
variable; D, diversity; J, joining) and FUS-\*CHOP\* (a liposarcoma  
tumor-specific fusion protein that is produced as a result of a  
chromosomal translocation) can function as transcription activators of  
specific responsive reporter...

...provides evidence that transcriptional activation can be mediated by a  
gene activated by translocation in T-cell acute leukemias. In the case of  
the liposarcoma, \*transactivation\* by the FUS-\*CHOP\* protein occurs  
because the FUS transcriptional activation domain is added to the  
DNA-binding \*CHOP\* protein normally lacking such activity. Therefore, the  
association of transcriptional activation and DNA-binding elements is a  
common consequence in proteins activated or newly created...

2/3,K/10 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2002 Inst for Sci Info. All rts. reserv.

06829723 Genuine Article#: ZV238 No. References: 32

**Title: Human translocation liposarcoma CCAAT enhancer binding protein  
(C/EBP) homologous protein (TLS-CHOP) oncoprotein prevents adipocyte  
differentiation by directly interfering with C/EBP beta function**

Author(s): Adelmant G; Gilbert JD; Freytag SO (REPRINT)

Corporate Source: HENRY FORD HLTH SYST,DEPT BIOL MOL, 1 FORD PL, WING  
5D/DETROIT//MI/48202 (REPRINT); HENRY FORD HLTH SYST,DEPT BIOL  
MOL/DETROIT//MI/48202; HENRY FORD HLTH SYST,DEPT RADIAT  
ONCOL/DETROIT//MI/48202

Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1998, V273, N25 (JUN 19), P  
15574-15581

ISSN: 0021-9258 Publication date: 19980619

Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE  
PIKE, BETHESDA, MD 20814

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Abstract: Human translocation liposarcoma (TLS)-CCAAT/enhancer binding  
protein (C/EBP) homologous protein (\*CHOP\*) is a fusion oncoprotein  
found specifically in a malignant tumor of adipose tissue and results  
from a t(12;16) translocation that fuses the amino-terminal part of TLS  
to the entire coding region of \*CHOP\*. Being that \*CHOP\* is a member of  
the C/EBP transcription factor family, proteins that comprise part of  
the adipocyte differentiation machinery, we examined whether TLS-\*CHOP\*  
blocked adipocyte differentiation by directly interfering with C/EBP  
function. Using a single-step retroviral infection protocol, either  
wild-type or mutant TLS-\*CHOP\* were co-expressed along with C/EBP beta  
in naive NIH3T3 cells, and their ability to inhibit C/EBP beta driven  
adipogenesis was determined, TLS-\*CHOP\* was extremely effective at  
blocking adipocyte differentiation when expressed at a level comparable  
to that observed in human myxoid liposarcoma. This effect of TLS-\*CHOP\*  
required a functional leucine zipper domain and correlated with its  
ability to heterodimerize with C/EBP beta and inhibit C/EBP beta DNA  
binding and \*transactivation\* activity in situ. In contrast, the TLS-  
\*CHOP\* basic region was dispensable, making it unlikely that the  
inhibitory effect of TLS-\*CHOP\* is attributable to unscheduled gene  
expression resulting from TLS-\*CHOP\*'s putative \*transactivation\*

activity. Another adogenic transcription factor, PP gamma 2, was able to rescue TLS-\*CHOP\*-inhibited cells, indicating that TLS-\*CHOP\* interferes primarily with C/EBP beta-driven adipogenesis and not with other requisite events of the adipocyte differentiation program. Together, the results demonstrate that TLS-\*CHOP\* blocks adipocyte differentiation by directly preventing C/EBP beta from binding to and \*transactivating\* its target genes. Moreover, they provide strong support for the thesis that a blockade to normal differentiation is an important aspect of the cancer process.

2/3,K/11 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2002 Inst for Sci Info. All rts. reserv.

04238246 Genuine Article#: RQ624 No. References: 95

**Title: THE EMERGING MOLECULAR-GENETICS OF SARCOMA TRANSLOCATIONS**

Author(s): LADANYI M

Corporate Source: MEM SLOAN KETTERING CANC CTR,DEPT PATHOL,1275 YORK  
AVE/NEW YORK//NY/10021; MEM SLOAN KETTERING CANC CTR,DEPT HUMAN  
GENET/NEW YORK//NY/10021

Journal: DIAGNOSTIC MOLECULAR PATHOLOGY, 1995, V4, N3 (SEP), P162-173  
ISSN: 1052-9551

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: consisting in the fusion of a gene with an RNA-binding domain (EWS or TLS) with a transcription factor gene (FLI1, ERG, ETV1, ATF-1, \*CHOP\*, or WT1). The observation that the different translocation partners of the EWS gene are specifically associated with several distinct types of primitive sarcomas suggests a...

...the target specificity of the transcriptional activation mediated by these chimeric proteins, whereas the partner supplying the N-terminal domain and promoter region determines their \*transactivation\* potential and expression level. Further analysis of the normal functions and expression patterns of these genes should yield insights into the histogenesis of these different...

2/3,K/12 (Item 1 from file: 98)

DIALOG(R)File 98:General Sci Abs/Full-Text  
(c) 2002 The HW Wilson Co. All rts. reserv.

03751718 H.W. WILSON RECORD NUMBER: BGS198001718 (USE FORMAT 7 FOR FULLTEXT)

**Consequences of chromosomal abnormalities in tumor development.**

Sanchez-Garc a, I

Annual Review of Genetics (Annu Rev Genet) v. 31 ('97) p. 429-53

SPECIAL FEATURES: bibl il ISSN: 0066-4197

LANGUAGE: English

COUNTRY OF PUBLICATION: United States

WORD COUNT: 10415

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

... The promyelocytic leukemia Kruppel-like zinc finger (PLZF) protein normally represses expression of a cyclin A promoter reporter gene, but the PLZF-RARa fusion protein \*transactivates\* cyclin A expression (19), which is essential for cell cycle progression and growth. \*CHOP\*, which was fingered as an oncoprotein through its identification as a chromosomal translocation fusion partner of the EWS RNA-binding protein in a myxoid liposarcoma, blocks differentiation of adipocytes (6). Transformation of fibroblasts requires a contribution from the EWS fusion partner, but \*CHOP\* may act as an oncoprotein by preventing expression of differentiation genes. PML, which was uncovered as a translocation partner of RARa in promyelocytic leukemia (PML...

2/3,K/13 (Item 1 from file: 370)  
DIALOG(R) File 370:Science  
(c) 1999 AAAS. All rts. reserv.

00500410 (USE 9 FOR FULLTEXT)

**Stress-Induced Phosphorylation and Activation of the Transcription Factor  
CHOP (GADD153) by p38 MAP Kinase**

Wang, XiaoZhong; Ron, David

Departments of Medicine and Cell Biology, Skirball Institute of  
Biomolecular Medicine, and the Kaplan Cancer Center, New York University  
Medical Center, New York, NY 10016, USA.

Science Vol. 272 5266 pp. 1347

Publication Date: 5-31-1996 (960531) Publication Year: 1996

Document Type: Journal ISSN: 0036-8075

Language: English

Section Heading: Reports

Word Count: 2164

(THIS IS THE FULLTEXT)

Text: \*CHOP\*, also known as growth arrest and DNA damage-inducible gene 153 (GADD153), is expressed in response to various metabolic stresses in all cells tested (B1) . By forming heterodimers with members of the C/EBP family of transcription factors, \*CHOP\* influences gene expression as both a dominant-negative regulator of C/EBP binding to one class of DNA targets (B2) and by directing \*CHOP\*-C/EBP heterodimers to other sequences (B3) . Both modes of action are implicated in the effects of \*CHOP\* on cellular growth (B4) (B5) and differentiation (B6) . In addition to inducing \*CHOP\* expression, stress increases the ability of \*CHOP\* to activate gene expression (B3) . This latter observation prompted us to study the possible stress-induced posttranslational modification of \*CHOP\*.

...

...In stressed cells, \*CHOP\* is present in two forms, distinguishable by their migration in SDS-polyacrylamide gel electrophoresis (Fig. 1A) (B7) . Isoelectric focusing revealed the form of \*CHOP\* with decreased mobility to have a more acidic isoelectric point, suggestive of phosphorylation. To study the possible effects of stress on \*CHOP\* phosphorylation independently of the stress-induced increase in protein, we used cells constitutively expressing an epitope-tagged form of \*CHOP\* that is distinguishable in size from the endogenous protein. In vivo labeling with [<sup>32</sup>P]orthophosphate followed by immunoprecipitation revealed two to four times as much phosphorylation of tagged \*CHOP\* in response to stress with no change in the amount of protein (Fig. 1B). The stress-induced endogenous \*CHOP\* was also phosphorylated...

...Comparison of the tryptic phosphopeptide maps of the tagged \*CHOP\* from stressed and unstressed cells showed most of the inducible phosphorylation to occur on two distinct peptides (Fig. 1C). All known \*CHOP\* proteins contain two adjacent serine residues [amino acids 78 and 81 in the mouse sequence (B2) ] in a context that may serve as a substrate for members of the MAP kinase family (Fig. 1E). Members of this family are activated by many of the same insults that induce \*CHOP\* expression (B8) and may therefore participate in the stress-induced phosphorylation of \*CHOP\*. Conversion of Ser.<sup>sup</sup>(78) or Ser.<sup>sup</sup>(81) to Ala led to the selective loss of inducible phosphorylation of one tryptic peptide (Fig. 1C). The minimal residual phosphorylation of the Ala-substituted peptides may have resulted from the presence of other phosphorylated residues. The mutant \*CHOP\* proteins exhibited substantially less total phosphorylation in both the basal and induced state, with marked attenuation in the case of the Ala.<sup>sup</sup>(81) substitution. Replacing both Ser.<sup>sup</sup>(78) and Ser.<sup>sup</sup>(81) with Ala abolished nearly all phosphorylation of \*CHOP\* (Fig. 1D...

...The above results indicate that the stress-inducible phosphorylation of \*CHOP\* is dependent on two serines present in a context favorable for



phosphorylation by MAP kinases (B9) (B10) . Members of the family can be divided into...

...called Mpk2 and SAPK-2 (B13) (B14) . The last two groups respond to overlapping sets of stress signals, which include many that induce transcription of \*CHOP\*. p38 purified from stressed COS-1 cells phosphorylated bacterially expressed \*CHOP\* in vitro. Mutant \*CHOP\*, bearing the Ala.sup(78,81) substitution, was not a substrate for p38 (Fig. 2A). \*CHOP\* was not a substrate for SAPK-1 (beta) and was only weakly phosphorylated on Ser.sup(78) by ERK2. To explore further the relation between p38 and \*CHOP\*, we made use of a recently described, highly specific inhibitor of the enzyme, SB203580 (B15) . The inhibitor led to attenuation of the stress-inducible phosphorylation of \*CHOP\* on Ser.sup(78) and Ser.sup(81), whereas the activity of the related SAPK-1s was increased (Fig. 2, B and C). Collectively, these findings implicate p38 in the phosphorylation of \*CHOP\* in vivo. The ability of methyl methanesulfonate (MMS) to transcriptionally induce \*CHOP\* (B1) (B2) was not inhibited by SB203580. Thus, different stress-induced pathways regulate the transcription of \*CHOP\* and its phosphorylation...

...\*CHOP\* does not homodimerize. When present in cells, it forms stable heterodimers, predominantly with C/EBP (beta) (B3) . Indistinguishable quantities of C/EBP (beta) were found to be associated with wild-type and Ala.sup(78,81) \*CHOP\* in both stressed and unstressed cells (Fig. 3A). The DNA binding activity of \*CHOP\*, measured through use of a gel mobility-shift assay on a site that binds \*CHOP\*-C/EBP heterodimers, was also not affected by the Ala.sup(78,81) substitution (Fig. 3B). Phosphorylation therefore does not appear to alter the dimerization or DNA-binding properties of \*CHOP\*, although stress increases the ability of \*CHOP\* to activate transcription (B3) . Known \*CHOP\* target sequences also bind C/EBP dimers (B3) , and MAP kinases can phosphorylate the major dimerization partner of \*CHOP\*, C/EBP (beta) (B16) . Therefore, to evaluate possible effects of \*CHOP\* phosphorylation on its ability to activate transcription, we used a modified form of \*CHOP\* in which the leucine zipper was deleted and the protein fused to the DNA-binding domain of the yeast \*transactivator\* Gal4. Because such proteins lack a \*CHOP\* dimerization domain and bind DNA through the heterologous Gal4 peptide, the confounding effects of the stress-induced modification of the dimerization partners of \*CHOP\* is avoided. MMS treatment or overexpression of p38 markedly activated a reporter gene driven by Gal4 binding sites only when the \*CHOP\*-Gal4 chimeric protein was present (7.9 and 10 times as much, respectively); overexpression of SAPK-1 (beta) or ERK2 was without effect. The effect of MMS and p38 appeared to be dependent on \*CHOP\* phosphorylation because in cells expressing \*CHOP\*-Gal4 with an Ala.sup(78,81) substitution, reporter gene expression was not enhanced by these stimuli (Fig. 3C...

...Overexpression of \*CHOP\* leads to attenuated adipocytic differentiation of 3T3-L1 cells (B6) . This effect is dependent on the ability of the protein to dimerize and bind DNA. We compared the ability of wild-type and of Ala.sup(78,81) \*CHOP\* to inhibit adipocytic differentiation in 3T3-L1 cells. Both proteins inhibited differentiation; however, cells expressing wild-type \*CHOP\* showed less lipid accumulation than cells expressing the Ala.sup(78,81) substitution mutant (Fig. 3D). Thus, we conclude that Ser.sup(78) and Ser.sup(81) are necessary for the full biological activity of \*CHOP\*.

...

...Under favorable conditions, \*CHOP\* is not present in cells. Stress leads to accumulation of \*CHOP\* in the nucleus. Our results indicate that stress also leads to phosphorylation of the protein and that this modification results in enhanced transcriptional activation by \*CHOP\*. The \*CHOP\* accumulation in response to stress is apparently dependent on the activity of cellular kinases because it can be inhibited by the broad-spectrum kinase inhibitors 2-aminopurine and H7 (B1) . However, the signaling pathway that activates \*CHOP\* phosphorylation is distinct from the one that leads to \*CHOP\* expression; an inhibitor of p38 does not block \*CHOP\*

expression (Fig. 2B). Perhaps the potent ability of \*CHOP\* to modify cell growth and differentiation requires careful modulation beyond that provided by the mechanisms that control expression of the protein. The stress-activated p38 appears to serve a specific role in this fine-tuning of \*CHOP\* activity...

...Figure F1

Caption: Stress-induced phosphorylation of \*CHOP\* on Ser.<sup>sup</sup>(78) and Ser.<sup>sup</sup>(81). (A) Two isoforms of \*CHOP\* are present in stressed cells. NIH 3T3 cells were cultured in a medium with a low concentration of glucose [(Glu), 2 mM, 16 hours] or treated with tunicamycin (25 (μ) g/ml, 4 hours). \*CHOP\*, detected by protein immunoblotting with the 9C8 monoclonal antibody (B6), migrates as a doublet with 11% SDS-polyacrylamide gel electrophoresis (SDS-PAGE). The form with less mobility is more acidic on isoelectric focusing (IEF). (B) Endogenous \*CHOP\* and Myc epitope-tagged \*CHOP\* [9E10 \*CHOP\* (B5)] from [<sup>sup</sup>(32)P]orthophosphate-labeled NIH 3T3 cells (500 (μ) Ci/ml, 5 hours) that were treated with the stress-inducing alkylating agent MMS (100 (μ) g/ml, 3 hours) were immunoprecipitated with 9C8. Autoradiography (top) and protein immunoblotting with rabbit antiserum to \*CHOP\* (bottom) are shown. (C) Wild-type (WT) and mutant \*CHOP\*, immunoprecipitated from treated or untreated NIH 3T3 cells with the antibody to 9E10 (B17), were digested with trypsin and the phosphopeptides separated by electrophoresis and...

...the tryptic cleavage sites, is shown above the autoradiograms (B19). (D) Comparison of the in vivo phosphorylation of wild-type and Ala substitution mutants of \*CHOP\* from untreated cells and cells treated with MMS. Autoradiography (top) and \*CHOP\* immunoblot (bottom) are shown. (E) Schematic diagram of the \*CHOP\* protein. The region containing the stress-inducible phosphorylation sites is stippled, and the peptide sequence of this area, from four mammalian species, shows the conservation ...

...Figure Removed

Figure F2

Caption: Phosphorylation of \*CHOP\* by p38 MAP kinase. (A) Tryptic phosphopeptide maps of bacterially expressed \*CHOP\* phosphorylated in vitro with purified MAP kinases. Tagged forms of p38 (B13), SAPK-1 (beta) (B20), and ERK2 (B21) were expressed in COS-1 cells. Activated kinases, purified by the tag, were used to phosphorylate bacterially expressed wild-type or Ala.<sup>sup</sup>(78,81) \*CHOP\* with [ (gamma) -<sup>sup</sup>(32)P]ATP (B22). The labeled proteins were evaluated ...SAPK-1 (beta) (B12) (B20) and myelin basic protein (MBP) for ERK2 (B21)]. (B) A p38-specific inhibitor, SB203580 (SB), blocks MMS-inducible phosphorylation of \*CHOP\*. NIH 3T3 cells expressing 9E10 \*CHOP\* were labeled with [<sup>sup</sup>(32)P]orthophosphate as in Fig. 1B. The indicated concentration of SB203580 was added 30 min before MMS treatment. SB203580 inhibits MMS-induced phosphorylation of \*CHOP\* in a dose-dependent manner (top, autoradiogram) with no effect on 9E10 \*CHOP\* expression or on the induction by MMS of the endogenous \*CHOP\* (middle, \*CHOP\* protein immunoblot). In-gel kinase assay of SAPK-1s with GST-Jun as a substrate (B23) shows that the activity of SAPK-1s is increased (bottom). (C) Tryptic phosphopeptide mapping of \*CHOP\* from cells treated with MMS in the absence or presence of SB203580 (10 (μ) M) shows that inhibition of \*CHOP\* phosphorylation occurs at Ser.<sup>sup</sup>(78) and Ser.<sup>sup</sup>(81). The peptide marked "X" was constitutively phosphorylated...

...Figure Removed

Figure F3

Caption: Functional consequences of \*CHOP\* phosphorylation by p38. (A) Phosphorylation at Ser.<sup>sup</sup>(78) and Ser.<sup>sup</sup>(81) does not affect the dimerization of \*CHOP\* with C/EBP (beta). Complexes of 9E10-tagged wild-type and Ala.<sup>sup</sup>(78,81) \*CHOP\* from NIH 3T3 cells were immunoprecipitated with 9E10 or nonimmune mouse immunoglobulin G (IgG) and immunoblotted with rabbit antisera to \*CHOP\* (top) or C/EBP (beta) (bottom). (B) Phosphorylation at Ser.<sup>sup</sup>(78) and Ser.<sup>sup</sup>(81) does not

affect the ability of \*CHOP\* to bind DNA. Nuclear extract from cells expressing wild-type or Ala.sup(78,81) 9E10 \*CHOP\* were used in a gel shift of a labeled \*CHOP\*-binding DNA fragment (B3) . Both proteins form indistinguishable complexes that were disrupted by antibodies to \*CHOP\* (3H8) and to the tag (9E10) but not by control IgG. (C) \*CHOP\* has a stress and p38-inducible \*transactivation\* domain. Wild-type or Ala.sup(78,81) \*CHOP\* was fused to the yeast Gal4 DNA-binding domain (B24) . NIH 3T3 cells were transfected with the indicated combinations of a reporter plasmid driven by two Gal4 binding sites (UASp59-luciferase, 5 (mu) g per plate), \*CHOP\*-Gal4 expression vectors (5 ng per plate), and kinase expression vector (5 ng per plate). Where indicated, the cells were treated with MMS (100 (mu) ...

...for luciferase assay. Shown are the mean and range values of a typical experiment performed in duplicate and reproduced four times. Wild-type and mutant \*CHOP\*-Gal4 were expressed in indistinguishable amounts in transfected cells. The inset shows a gel shift of a labeled Gal4 binding-site oligonucleotide by extracts from cells transfected with wild-type and mutant \*CHOP\*-Gal4 proteins. The arrow points to the complex supershifted with the 9C8 antibody to \*CHOP\*. (D) Ala.sup(78,81) \*CHOP\* is attenuated in its ability to inhibit adipocytic differentiation of 3T3-L1 cells. Pools of cells stably transfected with empty SRA retrovirus [ PSI .sup(-) (B25) ] or virus expressing either wild-type or mutant \*CHOP\* were induced to differentiate in vitro to adipocytes (B26) . The differentiation process was monitored by staining the fixed plates with the lipophilic dye Oil Red...

2/3,K/14 (Item 1 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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136115942 CA: 136(8)115942c JOURNAL  
**Feedback inhibition of the unfolded protein response by GADD34-mediated dephosphorylation of eIF2.alpha.**  
AUTHOR(S): Novoa, Isabel; Zeng, Huiqing; Harding, Heather P.; Ron, David  
LOCATION: Skirball Institute of Biomolecular Medicine, Department of Medicine, Kaplan Cancer Center, New York University School of Medicine, New York, NY, 10016, USA  
JOURNAL: J. Cell Biol. DATE: 2001 VOLUME: 153 NUMBER: 5 PAGES: 1011-1021 CODEN: JCLBA3 ISSN: 0021-9525 LANGUAGE: English PUBLISHER: Rockefeller University Press

2/3,K/15 (Item 2 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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133087544 CA: 133(7)87544s JOURNAL  
**Bile acid-induced activation of activator protein-1 requires both extracellular signal-regulated kinase and protein kinase C signaling**  
AUTHOR(S): Qiao, Dianhua; Chen, Weixing; Stratagoules, Elias D.; Martinez, Jesse D.  
LOCATION: Arizona Cancer Center, Department of Radiation Oncology, University of Arizona, Tucson, AZ, 85724, USA  
JOURNAL: J. Biol. Chem. DATE: 2000 VOLUME: 275 NUMBER: 20 PAGES: 15090-15098 CODEN: JBCHA3 ISSN: 0021-9258 LANGUAGE: English PUBLISHER: American Society for Biochemistry and Molecular Biology

2/3,K/16 (Item 3 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
(c) 2002 AMERICAN CHEMICAL SOCIETY. All rts. reserv.

130061837 CA: 130(6)61837c JOURNAL  
**Cloning of mammalian Irel reveals diversity in the ER stress responses**  
AUTHOR(S): Wang, Xiao-Zhong; Harding, Heather P.; Zhang, Yuhong;

Jolicoeur, Ethel M.; Kur, Masahiko; Ron, David  
LOCATION: the Departments of Medicine, Cell Biology and the Kaplan Cancer  
Center, NYU Medical Center, Skirball Institute of Biomolecular Medicine,  
New York, NY, 10016, USA  
JOURNAL: EMBO J. DATE: 1998 VOLUME: 17 NUMBER: 19 PAGES: 5708-5717  
CODEN: EMJODG ISSN: 0261-4189 LANGUAGE: English PUBLISHER: Oxford  
University Press

2/3,K/17 (Item 4 from file: 399)  
DIALOG(R)File 399:CA SEARCH(R)  
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125138837 CA: 125(11)138837j JOURNAL  
GADD153/CHOP, a DNA damage-inducible protein, reduced CAAT/enhancer  
binding protein activities and increased apoptosis in 32D cl3 myeloid cells  
AUTHOR(S): Friedman, Alan D.  
LOCATION: Div. Pediatric Oncol., Johns Hopkins Oncol. Cent., Baltimore,  
MD, 21287, USA  
JOURNAL: Cancer Res. DATE: 1996 VOLUME: 56 NUMBER: 14 PAGES: *maybe*  
3250-3256 CODEN: CNREA8 ISSN: 0008-5472 LANGUAGE: English

2/3,K/18 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2002 ProQuest Info&Learning. All rts. reserv.

01848873 ORDER NO: AADAA-I3024067  
**The role of C/EBPepsilon in terminal granulopoiesis**  
Author: Chih, Doris Yiafang  
Degree: Ph.D.  
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0031)  
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...interacting partners expressed in human leukocytes. The genes  
isolated fall into four large classes of factors: (1) other leucine  
zipper proteins such as CREB2, \*CHOP\*, C/EBPdelta, and AF-17;  
(2) proteins involved in signal transduction, such as STAT6 and Sgn3;  
(3) protein inhibitor of activated STAT1...

...C/EBP may provide for the specificity of activation of  
myeloid-specific genes and heterodimerization with C/EBPdelta; or other  
factors may allow \*transactivation\* via DNA binding to specific sites (as  
in the case of lactoferrin promoter) or other mechanisms.

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**A MODEL FOR NEUTROPHIL DIFFERENTIATION: SYNERGISTIC UPREGULATION OF THE  
G-CSFR PROMOTER BY RAS AND C/EBP(Alpha) (C EBP\$ALPHA\$)**  
Author: SMITH, LAURA TERESA  
Degree: PH.D.  
Year: 1998  
Corporate Source/Institution: HARVARD UNIVERSITY (0084)  
Source: VOLUME 59/01-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
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...or deletion of these sites results in significant decreases in  
promoter activity. Co-transfection of both PU.1 and C/EBP\$alpha\$ are able  
to \*transactivate\* either multimers containing the appropriate binding

site, or the native promoter itself in cell lines that do not express measurable levels of either of these...

...physically in GST-pull down assays via their DNA-binding domains, but since co-transfection of each of these factors does not result in additional \*transactivation\* above the levels seen with each factor alone, the significance of this interaction for the G-CSFR promoter is not clear. Co-transfection of the...

...EBP $\alpha$  site is necessary and sufficient for synergy and the region of C/EBP $\alpha$  necessary for synergy is area 3-5 in its \*transactivation\* domain. Furthermore, the synergy between Ras and C/EBP $\alpha$  also occurs with the M- and GM-CSF receptor promoters, suggesting that the CSF receptors...

...mechanism for the synergy between Ras and C/EBP $\alpha$  is not clear. Two proteins that attenuate Ras/C/EBP $\alpha$  synergy have been described, \*CHOP\* and Myb. \*CHOP\* is a C/EBP family member known to negatively regulate C/EBP function and Myb is an important hematopoietic transcription factor that activates the expression...

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